

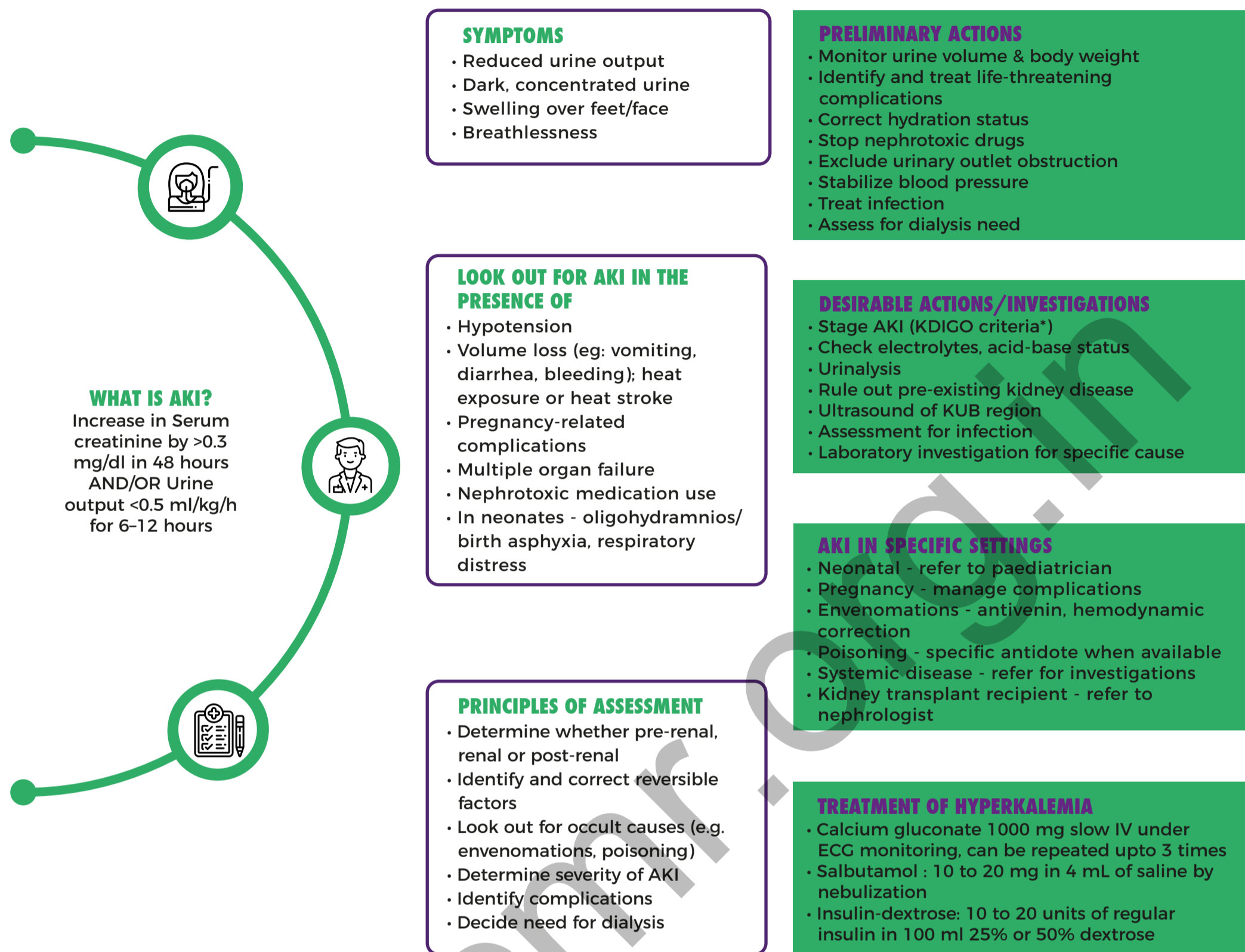


Department of Health Research  
Ministry of Health and Family Welfare, Government of India



**icmr**  
INDIAN COUNCIL OF  
MEDICAL RESEARCH  
Serving the nation since 1911

## Standard Treatment Workflow (STW) for the Management of **ACUTE KIDNEY INJURY** ICD-10-N17.9



## MANAGEMENT

### PRIMARY CARE

- Detailed history and physical examination
- Identify and correct volume deficit
- Stop nephrotoxic agents
- Identify and correct bladder outlet obstruction
- Give anti-snake venom if indicated
- Identify hyperkalemia and start treatment
- Identify pulmonary edema- start intravenous furosemide and oxygen
- PD if indicated
- Timely referral after stabilisation

### SECONDARY CARE

- Detailed history and physical examination
- Identify and correct volume deficit
- Stop nephrotoxic agents
- Identify and treat hyperkalemia, metabolic acidosis and pulmonary edema
- Identify and correct urinary tract obstruction (USG, CT)
- Detailed investigation for infections
- Manage pregnancy complications - deliver if indicated
- Look for underlying CKD
- Dialysis (PD or HD)

### TERTIARY CARE

- Detailed history and physical examination
- Identify and correct volume deficit
- Stop nephrotoxic agents
- Identify and correct urinary tract obstruction (USG, CT scan)
- Identify and treat hyperkalemia, metabolic acidosis and pulmonary oedema
- Detailed investigation for infections
- Manage pregnancy complications- deliver if indicated
- Look for underlying CKD
- Investigations for specific cause (including imaging, genetic tests)
- Kidney biopsy
- Dialysis (PD or HD)

### RED FLAGS FOR URGENT REFERRAL

- Indications for dialysis
- Unexplained AKI
- Involvement of other organs
- Sepsis
- Systemic disease
- Complicated pregnancy

### INDICATIONS FOR DIALYSIS

- Fluid overload
- Pericarditis
- Hyperkalemia
- Severe metabolic acidosis
- Encephalopathy
- Severe uraemia
- To create space for fluids or blood products

### FOLLOW-UP OF AKI

- UO > 1L, stable or falling creatinine, no symptoms: stop dialysis
- Not resolving for >2 weeks: CECT to exclude cortical necrosis; kidney biopsy as indicated
- Look for systemic diseases (e.g. vasculitis, myeloma, TMA)
- Serum creatinine and urine protein q 6-12 months for life

## ABBREVIATIONS

**AKI:** Acute Kidney Injury  
**CECT:** Contrast-enhanced CT scan

**PD:** Peritoneal dialysis  
**TMA:** Thrombotic microangiopathy

**CKD:** Chronic Kidney Disease  
**HD:** Hemodialysis

**UO:** Urine output  
**USG:** Ultrasonography

## REFERENCE

\***KIDNEY DISEASE:** Improving Global Outcomes (KDIGO) Acute Kidney Injury Work Group. KDIGO Clinical Practice Guideline for Acute Kidney Injury. Kidney Int, Suppl. 2012; 2: 1-138

**KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES**

This STW has been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit our web portal ([stw.icmr.org.in](http://stw.icmr.org.in)) for more information.  
© Indian Council of Medical Research and Department of Health Research, Ministry of Health & Family Welfare, Government of India.